

P915

815.9
1786Reprinted from The Journal of Geography
Vol. V, No. 1, January, 1906

1906

IMPORTANCE OF TROPICAL POSSESSIONS

II

THE INDUSTRIAL AND COMMERCIAL IMPORTANCE OF A TROPICAL POSSESSION.

BY GEORGE D. HUBBARD
Ohio State University, Columbus, O.

IT is the purpose of this paper to show how geographic conditions determine what shall be the economic relation between a temperate and a tropical country. All are more or less aware of the great climatic differences between temperate and inter-tropical lands, but few have made any extensive study of other existing geographic differences. A moment's meditation will make it clear that many of our luxuries and some of our necessities are from countries in very low latitudes; and that our industrial, social and economic organizations would each undergo serious alterations, were we obliged to return to the geographic limitations under which we of the mid-latitudes worked only four or five centuries ago. From the warm countries we now import rubber, coffee, fibers, gums, oils, drugs, dyes, starch, sugar, chocolate, cacao and fruits, early vegetables and ornamental woods; also ivory, skins of manatee, dugong, crocodile and monkey, to say nothing of the precious metals annually attracted to our mints and crucibles. Essentially all of these commodities require for their best development one or more of the following—high temperature, with no frost at any season, excessive rainfall and humidity, long ripening season, or are confined to warm seas—conditions which do not obtain outside of the tropics. We also value, perhaps too highly, tropical countries as markets for the ever increasing products of our shops and factories, because, with their lack of labor, skill, and capital almost nothing is made in these lands beyond the immediate requirements of local consumption.

There seem to be four fundamental motives for exploiting and acquiring new lands, (1) desire for luxuries, (2) demand for an increase in the amount or variety of the more substantial raw products, (3) the need of new lands for colonization by surplus population, (4) demand for markets.

Among people of the temperate regions the first motive is a prominent feature in most of their exploitation, especially in tropical countries. In modern times the second motive is usually active and exceedingly potent in the conquest of tropical possessions. The third has proved itself nearly valueless because of the difficulty, in a region very different climatically from the home locality, of effective acclimatization. The fourth motive is very strong in manufacturing countries, but, owing to the few wants of the natives, the value of tropical countries as markets is limited to certain classes of commodities, notably building and construction materials and adapted

machinery. To sum up then there are two distinct inducements for the development of tropical countries, (a) their new, cheaper or enlarged supplies of raw materials for our factories or directly for our tables, (b) their possibilities as markets for certain classes of our manufactured goods. It is to the geographic relations of these two propositions that I desire to turn the reader's attention. For illustration, one tropical region is presented, the French possessions in Further India. This country is one out of several which might well have been selected.

French Indo-China, according to the Statesman's Year Book, 1904, has an area of 250,000 square miles. This is contained in four dependencies, Cambodia, Cochin-China, Annam and Tonkin, with a total population of about 18,000,000, equivalent to 72 persons to every square mile whether it be dense forest, tangled jungle, pestilent marsh, fluctuating lake, rugged mountain or fertile plain,—all of which types of topography are fairly well represented in the country. For comparison, New York State with its area of 47,000 square miles and population of over 7,000,000, has 153 per square mile, approximately half of the total population being in Greater New York. There are no large cities in Indo-China. Two have each about 100,000 inhabitants and only two or three others exceed 20,000. In New York, 20 cities, besides the chief port, have each a population of over 20,000, and an average of over 60,000, leaving for the village and rural population 2,600,000 people. These figures indicate that the density of the rural and village population in French Indo-China is 30 per cent. higher than that of our great agricultural state. If the natives were as efficient as our American laborers, this would mean half as much labor possible per unit as in New York, or practically the same as that of the state outside of the metropolis. But primitive tools, wasteful methods, and a tropical climate so handicap the native that the potential efficiency is considerably less than ours, while the actual is still lower. However, despite all the handicaps, labor is going to waste in each of the dependencies.

Another element in the geographic conditions—climate, as just suggested, is thoroughly tropical as to excessive humidity and uniformity of high temperature. The mean annual temperature ranges from 70°-80° Fahr. throughout the lowlands, while on the mountains it decreases in proportion to the altitude; the mean annual rainfall ranges from 90 inches in the lowlands to 200 inches in the hills, with even higher local records. It is not a healthful climate, but possesses the general enervating effects of humid heat. Because of the decaying organic matter in the filthy, stagnant water, in the oozy, slimy mud of the deltas, and in the soil of the coastal lowlands, added to the miserable native sanitary conditions, there are in the lowlands several malignant diseases, often very destructive.

Fertile soils abound everywhere and may be made very productive, except in marshes or on rugged slopes. Forests, rich in valuable timber, usually predominate in the landscape; grass furnishes splendid pasture; the two great deltas are unsurpassed rice districts and the continuous warmth and copious rainfall make it possible annually to raise two or even three crops of some plants. At present rice is the chief crop and furnishes the staple food. Cotton, coffee, tobacco, indigo, cane-sugar and spices, together with a great variety of tropical fruits, are among the successfully cultivated plants. Cattle do well on the deforested hillsides, and quantities of fish swarm the rivers and shallow seas to the southeast.

Transportation facilities are inadequate. Most of the streams are used by the native dugouts, but owing to shifting sandbars will not float even small modern river craft, to say nothing of ocean vessels. No canals have been built. Only about a thousand miles of railroad exist in the country and there are no wagon roads save the Mandarin's road which parallels the eastern coast for a thousand miles. To transport rice fifty miles by human portorage or on donkeys, the two most common methods, along the narrow, forest-girt bridle paths, costs more than to carry it by ocean vessel from the oriental seaport to Marseilles.

Aside from auriferous gravels and quartz veins at Bong Mien, Annam, about 65 miles southeast of Turan, the chief port, the country is practically without the precious metals. Coal is known in two or three places, and by some is said to be abundant, while others deny its occurrence in valuable quantities. No iron is known, except some poor ores in the hills, a long distance from the coal. Several other metalliferous deposits have been reported but nothing is apparently known about them. Hence little reliance can be placed upon their exploitation and development for the first steps in the evolution of an industrial state.

Agriculture comes next; and upon the products of the soil the country must depend for its exports. Consul Covert, of Lyons, in a report some three years ago says: "Students of French colonies advise the extensive culture in Tonkin of tea, tobacco, coffee, silk, indigo, cotton, ramie, oilseeds and flax."

At present rice constitutes about 75 per cent. of the total annual exports, which in 1902 rose to \$37,000,000. Other items on the export list are teak, sappan, lacquer, and other forest products, coffee, cattle and hides from the hills, tobacco, sugar, cotton, jute, pepper, copra and vanilla from the plantations, and fish, trepang and salt from the sea. In 1902 the imports amounted to about \$43,000,000, including large items for railroad and other building materials and machinery, nearly all of which remain in the hands of Europeans and are used primarily to increase the exports.

The above picture of the country and its resources discloses a fertile land under a tropical climate, with quantities of rich native crops, capable of becoming salable products if harvested and even crudely prepared; a land with unimproved rivers, no canals and no roads leading to the coast, save the sand-obstructed rivers and the bridle-paths for porters and pack donkeys, augmented by about 1000 miles of railroads; a country well populated with industrious but ignorant, backward people, insufficiently equipped and organized to get their products to market, and with a good government and administration, efficient so far as it goes, but powerless to prevent the frequent, destructive raids by the robber-bands from the hills, whose visits keep the interior valley people in constant terror and in a state of industrial indifference.

Earlier in the paper it was shown that in the modern conquest of new tropical countries one of two wants is seeking satisfaction, either a desire for raw materials or a desire for a market. In the light of the preceding paragraphs, which of her owner's wants can French Indo-China best supply? Here is a people who, while carrying on agriculture, never use any but the rudest tools and know no others; a people who navigate the streams and coast waters but need no boats besides a home-made dugout or a raft; have no roads, hence need no vehicles and no tools and machinery to make or repair either roads or wagons; have such fertile soil and favorable climatic conditions that fruit and vegetables are with little labor always ready for use; a region fairly densely populated; in such conditions of temperature that no wool and only a little cotton is worn, and no fuel, stoves, or complicated heating and ventilating contrivances are needed; a people whose culture requires no books, tapestry, costly fineries, delicate instruments or beautiful works of art, but which is satisfied with the showiest, tawdry gewgaws and ornaments in the French list of manufactures; in short, a native population that makes its necessities and desires practically nothing of value from abroad except civilization and industrial development until its tastes and habits are thereby changed. This change will require at least one generation.

European occupation and consequent development of a market, as in South Africa or in Victoria, Australia, is out of the question until colonists know the secret of acclimatization. The climate is unsuited to European laborers; malaria and other diseases lurk in the miasmatic atmosphere and will continue to be the strongest opponent to colonization until good sanitary conditions, shelter and suitable food can be supplied to the strong, and in addition, proper medical aid to those who are suffering. Very much can be done to improve existing conditions and make life more tolerable for the im-

migrant, but in the present state of the country the element of the population from the temperate zone will consist of political, industrial and commercial masters. They are coming to control, not to colonize. Moreover the prolific gardens and loaded fruit trees will furnish food for them as well as for the natives, and the warmth of the climate reduces the amount of clothing and of heating appliances needed. Hence though the Europeans have more wants per capita than the natives, yet because of their insignificant numbers, their personal wants in the aggregate are very small.

If neither the natives nor the foreign population are sufficient to create a demand for foreign goods we may safely say that French Indo-China is not a good market for the textiles, shoes, furniture, vehicles, books, ornaments, foods, instruments and art work made by the industries of France. And it further appears that the surest way to make it a good market is to educate the natives through the years to know the uses of some of these goods. Of course moderate quantities of various commodities of French manufacture are needed in the East, but it is asserted that France furnishes only a small part of the imports even of such kinds as are used. England, Japan and the United States supply most of the textiles, general manufactures, kerosene and flour.

The other half of the question remains to be considered. We have seen that the chief agricultural product of the cultivated districts, the lowlands, is rice, and that this cereal furnishes three-fourths of the present exports. The grain is collected in little boats or by human porters and carried to the ports and thence shipped to Hong-Kong, thence to France and to some of the nearby eastern countries. France buys other rice because her rice-growing possessions do not furnish enough. It is also true that the Oriental market for this product is not yet overstocked. Hence an increase in the production may readily increase the export. Expansion of the output may be brought about in several ways; by better and cheaper methods of cultivation and consequent enlarged yield on the present fields, by the addition of new territory to the rice fields in the immediate vicinity or by the extension of its culture to new districts. The latter will involve the overcoming of distance to market by improved transportation facilities. Other crops of marked promise are sugar-cane and coffee, the former on the lowlands, the latter in the hill countries. For both commodities temperate region markets are good, and with proper encouragement, guidance and assistance in the way of mills, transportation facilities and organization of labor, the industries and output may both be greatly expanded. Cotton, indigo and jute are at home on the low hills and higher parts of the plains, while vanilla and tea have considerable possibilities on the

higher slopes. Pepper, oilseeds and silk have been successfully grown. A number of the above have native wild varieties of real value. Everything in this list but sugar is imported by France, some from Latin America and the United States, some from Egypt and India.

The immense forest crops, now ready to harvest, might be cut and shipped. Many of the woods are very valuable in the western markets, hence lumbering would be a remunerative industry. Forests should, by all means, be conserved by some adequate system of forestry. Several fiber plants other than cotton and jute are known and seem to find the geographic conditions congenial. Spices, always in demand, promise excellent returns.

As these opportunities are dwelt upon, two questions arise, viz., those of labor and of transportation. The former has been dealt with to some extent. It may be said in addition that the natives in different localities know something of the details of the cultivation and preparation for market of several of these plants. The labor supply is sufficient and only needs supervision to render it efficient. A few Europeans are testing it at present by developing plantations, and they say that they experience no trouble in getting all the reliable help desired. It takes patience and careful management but it is remunerative. When the utilization of native labor is once established, the labor question will become simpler with each succeeding generation. The natives learn the new agricultural processes and at the same time learn enough of western ways to prevent their earnings from accumulating to stifle the spirit of work engendered by their growing needs. The native trade at present is largely in the hands of Chinese merchants, a race of good traders.

But before this export of raw materials, made possible by the employment of native labor, attains appreciable dimensions, the transportation problem must be solved. Imported capital in the hands of Europeans, and native labor, must build roads, construct and operate railroads, dredge and equip the rivers and harbors for commercial navigation, build bridges, piers, lighthouses, warehouses and factories. French capital now so largely invested in Russia will do France more service invested here. There are geographic difficulties, however, in the way of all this building and especially in connection with the road and railroad construction which are unappreciated by men of the temperate regions. The climate, with its enervating influence and associated diseases, tells on the men who must be sent out to survey the routes and superintend the work. The excessive rains flood the streams, wash out bridges and destroy roadbeds. Woodwork is rotted by the great humidity and warmth, or riddled by termites, while a large force of section men is necessary to keep the rank vegeta-

tion from taking possession of the whole roadway. Then the distance to iron factories and the difficulty of getting heavy freight into the interior add other items to the expense of both building and maintaining a railroad. Construction must begin at the water's edge and stretch inland, thereby always keeping the growing end in vital and active communication with the coast and with sources of materials. It is by the construction of roads, railroads, bridges, sawmills and other mills for elementary preparation of the products that imports are to be increased, and French iron factories given an enlarged output. As far as limited experience can demonstrate the judicious investment of capital in these enterprises encourages agriculture, grazing, forestry, lumbering and commerce, and entices the native products out of the country to points where they can be sold for enough to pay the interest on the capital, and to buy more goods from the native cultivators and the organized foreign planters and ranchmen.

This tropical country is a type to which belong Tropical Africa, the Philippines and the Dutch East Indies except Java. In the former labor is less efficient, but in the Philippines it is superior to that found in Indo-China. Java is now so successfully farmed out by the Dutch colonial system that its people possess a much larger degree of efficiency than those of French Indo-China. In fact they are where the latter may be in two or three generations by judicious co-operation and management. The West Indies and Mexico are now in a higher stage of industrial development, making and demanding many commodities not yet needed in Indo-China, because their native populations were largely destroyed or fused with the aliens, so that they are dominated by a mixed race. For this reason they belong to another type. India differs from French Indo-China in having abundant good labor and a high state of civilization upon which England has engrafted such a vigorous, modern, social and economic development that there is a real demand for many classes of manufactures in which the Indo-Chinese could not possibly be interested.

But in countries of the Indo-China type the geographic conditions and limitations are such that unless the working of mineral wealth opens them to industrial and commercial activity, they must be opened and developed through the products of the soil, forests, fruits, fibers, grains, drugs, spices, or cattle, and this by labor native to the tropics, under the control and direction of extra-tropical intelligence. Thus the tropical country as here illustrated furnishes raw materials to the temperate one and uses certain classes of manufactures from the latter. Each is dependent upon the other for certain elements of its own prosperity which it itself cannot produce.



3 0112 059081932